Assignment Two: Build a game AI

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Games And AI

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Abstract

One of the more complex elements in a modern game is creating believable artificial intelligence (AI) for non-playable characters (NPCs).

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# Introduction

The aim of this project is to create a fully-fledged game with AI.

# Game and AI type

The game created for this project is a first person shooter with a “hostage rescue” mission. It involves two types of a AI, a complex enemy AI agent and a simpler hostage agent. The enemy agents’ have 6 different behaviours compared to the hostage’s 2 behaviours. To add some complexity to the game there are two ways of completing the mission, the player can either use a combination of stealth and observation to free the hostage silently or they can for an all-out assault and attempt to shoot their way to freeing the hostage. This allows for the addition of stealth mechanics such as a crouching and a “hearing” mechanic for the enemies.

# Background Theory

Finite State Machines

Group AI

# Methodology

Enemy

Hostage

Group Control

Patrol Point system

# 3rd Party additions

# Conclusion

# References

# Appendix